Abstract

An electric arc GMAW welder is provided, which welder includes a high speed switching power supply with a controller for creating a first or second weld process across the gap between a workpiece and a welding wire advanced toward the workpiece. The first process uses a first current waveform and the second process uses a second current waveform. A circuit is provided for shifting between the first and second weld processes. The shifting circuit includes a counter for counting the waveforms in the first and second processes and a circuit to shift from the process being processed to the other weld process when the waveform count of the weld process being processed reaches a preselected number for such weld process.